

## ABSTRACT

The present invention provides an electroless plating liquid which allows a plating rate to be controlled, is not largely influential on semiconductor characteristics, and poses no problem on the health of workers, and a method of forming an interconnection according to a electroless plating process which uses such an electroless plating liquid. The electroless copper plating liquid contains dihydric copper ions, a complexing agent, an aldehyde acid, and an organic alkali. The electroless copper plating liquid is preferably be used in a method having the steps of forming an auxiliary seed layer for reinforcing a copper seed layer in an interconnection groove defined in a surface of a semiconductor device, and performing an electrolytic plating process using the seed layer including the auxiliary seed layer as a current feeding layer, for thereby filling copper in the interconnection groove defined in the surface of the semiconductor device.